CLAIMS:

1. A non-intrusive device for allowing spectrum analysis of a confined process stream through a light-transmitting conduit section of a process line, comprising a clip adapted to be externally mounted on the light-transmitting conduit section, said clip being at least partly made of a light-transmitting material and connectable to a source of light to direct a beam of light transversally through the conduit section, wherein said light-transmitting material is selected from a group consisting of: near infrared transmitting material and infrared transmitting material, and wherein said clip includes a hollow body housing at least one optical element, said hollow body defining a peripheral open ended slot for receiving the light-transmitting conduit section of the process line.

2. A non-intrusive device as defined in claim 1, wherein said clip is adapted to be releasably secured about the light-transmitting conduit section.

3. A non-intrusive device as defined in claim 1, wherein said clip is adjustable so as to be securable on light-transmitting conduits having different cross-sectional dimensions.

4. A non-intrusive device as defined in claim 1, wherein said peripheral slot receives interchangeable conduit adapters adapted to grip conduits of different external diameters.

5. A non-intrusive device as defined in claim 4, wherein said clip further includes a removable cover for maintaining a selected one of said interchangeable conduit adapters captive in said peripheral slot.

6. A non-intrusive device as defined in claim 1, wherein said peripheral slot has walls made of a light-transmitting material.

7. A non-intrusive device as defined in claim 6, wherein said body has a first connector adapted to be connected to a fiber optic cable to direct the beam of light through said peripheral slot and through the light-transmitting conduit section on which the clip is mounted.

8. A non-intrusive device as defined in claim 7, wherein said body has a second connector adapted to be connected to a light-receiving sensor for receiving the light emanating from the process stream through the light-transmitting conduit and the peripheral slot of the clip.

9. A non-intrusive device as defined in claim 8, wherein said second connector is connectable to said light-receiving sensor via a second fiber optic cable.

10. A non-intrusive device as defined in claim 1, wherein said peripheral slot defines an optical path therethrough for receiving and conducting the beam of light through the light-transmitting conduit section of the process line, said at least one optical element collecting the light transmitted through the conduit section.

11. A non-intrusive device as defined in claim 10, wherein a conduit adapter is removably installed in said open ended slot, said conduit adapter having a base wall from which extends a pair of spaced-apart conduit gripping arms adapted to receive therebetween the light-transmitting conduit section, wherein said conduit adapter is at least partly made of a light-transmitting material.

12. A conduit-mounted light-transmitting device in combination with a light-transmitting conduit section mounted in a process line for allowing optical analysis of a substance in the process line, the conduit-mounted light-transmitting

device comprising a clip detachably securable about the conduit section, said clip defining an optical path intersecting the conduit section when said clip is secured thereabout, wherein said clip has a substantially hollow body having a conduit engaging section by which said body is releasably mounted directly on the light-transmitting conduit section, said optical path extending through said conduit engaging section for receiving and conducting a beam of light through the light-transmitting conduit section, and at least one optical element housed within said body for collecting the light transmitted through the conduit section.

13. A combination as defined in claim 12, wherein said conduit engaging section includes an open ended slot defined in one face of the body, and a conduit adapter removably installed in said open ended slot, said conduit adapter having a base wall from which extends a pair of spaced-apart conduit gripping arms for receiving therebetween the light-transmitting conduit section, wherein said conduit adapter is at least partly made of a light-transmitting material.

14. A combination as defined in claim 12, wherein said body has a first connector adapted to be connected to a fiber optic cable to direct a beam of light through said conduit engaging section and through the light-transmitting conduit section on which the clip is mounted.

15. A combination as defined in claim 14, wherein said body has a second connector adapted to be connected to a light-receiving sensor for receiving the light emanating from the substance through the light-transmitting conduit section and the conduit-engaging section of the clip.

16. A combination as defined in claim 12, wherein said light-transmitting material is selected from a group consisting of: near infrared transmitting material and infrared transmitting material.

17. A combination as defined in claim 14, wherein said clip includes a body having a conduit-engaging section, said conduit engaging section being made of a light-transmitting material.

18. A combination as defined in claim 17, wherein said body has a first connector adapted to be connected to a fiber optic cable to direct a beam of light through said conduit engaging section and through the light-transmitting conduit section on which the clip is mounted.

19. A combination as defined in claim 18, wherein said body has a second connector adapted to be connected to a light-receiving sensor for receiving the light emanating from the substance through the light-transmitting conduit section and the conduit-engaging section of the clip.

20. A combination as defined in claim 17, wherein said light-transmitting material is selected from a group consisting of: near infrared transmitting material and infrared transmitting material.